A Survey of Five Types of Dangerous Behavior among Chronic Psychiatric Patients

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Dangerous behavior by psychiatric patients during treatment is a concern of staff and other patients surrounding them. Research in this area usually has focused on one type of dangerous behavior at a time, for example, self-injury,[1-3] assault,[4-6] or firesetting.[7-9] There have been few studies that assess the occurrence of more than one type of dangerous behavior in the same patient population.

My previous studies have compared assaultive patients to suicidal patients[10] and suicidal patients with assaultive behavior to suicidal patients without assaultive behavior.[11] However, these studies have involved assault and suicide attempts taking place just before admission to the hospital not while the patients were in the hospital. Surveys of multiple types of dangerous behavior in hospitals have used incident reports,[12,13] which are suspect in terms of underreporting.[14]

My survey is the first of its kind to assess directly the frequency of five types of dangerous behavior among patients residing in state hospitals. It will describe how these behaviors differ in terms of patient characteristics as well as the need for emergency control measures in hospitals.

Methods

This survey involved 5,164 patients residing for one month or longer in two state hospitals on Long Island. After directly assessing patients and reviewing their records, the staff of these hospitals completed an instrument that has been described in a report of a previous survey done in 1977.[15] The current survey instrument differs from the previous one in that it contains a clearer definition of the five types of dangerous behavior and an indication that they occurred in a specified time period. A patient was classified in the appropriate category of dangerous behavior if during the three months preceding the survey the patient had at least once in hospital (1) physically assaulted someone, (2) attempted suicide or deliberately injured himself, (3) destroyed furniture or property, (4) set a fire in the hospital, and/or (5) sexually assaulted someone. There were ten patients who had at least one type of dangerous behavior but for whom data on other types of dangerous behavior were missing. These patients were excluded from the study, so rates of each type of behavior are slightly underestimated.

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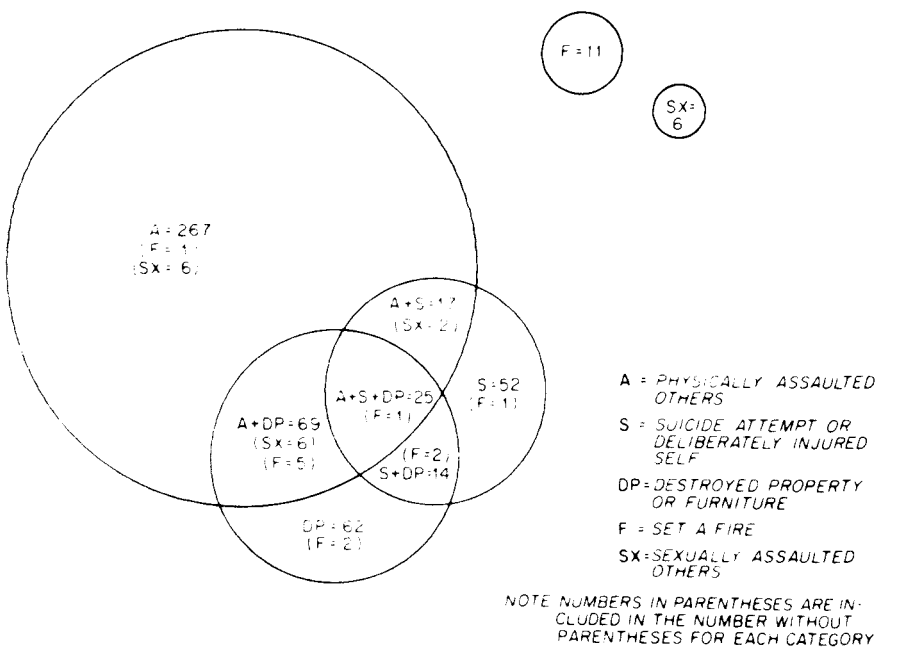
Results

Of the patients residing in the hospitals, there were 523 (10.1 percent) patients with one or more type of dangerous behavior in hospital in the three months preceding the survey. The numbers of patients manifesting each type of dangerous behavior, either alone or combined with other types of behavior, are presented in the Figure using Venn diagrams. The most frequent category was assault alone (5.2 percent) followed by assault and destruction of property (1.3 percent), suicide attempts alone (1.0 percent), and then assault and destruction of property and suicide attempts (0.5 percent). The combinations of assault and suicide as well as suicide and destruction of property each instituted 0.3 percent of the patients. The numbers of patients setting fires only (0.2 percent) and sexually assaulting others only (0.1 percent) were low, as were the number manifesting fire setting or sexual assault in combination with other forms of dangerous behavior (indicated in the Figure in parentheses). It should be noted that numbers of patients in parentheses are included in the total for each category of dangerous behavior.

Figure. Numbers of Patients Showing Dangerous Behaviors



The small number of patients with fire setting or sexual assault behaviors did not permit valid statistical analysis; however, a cursory look at the Figure reveals that sexual assault occurring with other dangerous behavior usually involved physical assault toward others while fire setting occurred in conjunction with destruction of property. In addition, a review of their records revealed that those patients setting fires or sexually assaulting

others, either alone or with other behaviors, were predominantly in the younger age groups and were diagnosed as non-paranoid schizophrenics.

The rest of the analysis will focus on the 506 patients who manifested one or more of the more frequent types of dangerous behavior: assault, suicide attempts, and destruction of property. The characteristics of these patients are presented in the Table.

Table. Characteristics of Patients Manifesting Assault, Suicide Attempts, and/or Destruction of Property in Hospital

	Percentages (N=506)
Diagnosis	
Paranoid schizophrenia	19.4
Non-paranoid schizophrenia	43.3
Depression	3.8
Psychotic organic brain syndrome	21.1
Mental retardation	9.1
Other non-psychotic disorders	3.4
	100.0
Age (years)	
17-24	6.3
25-34	15.8
35-44	13.2
45-54	12.8
55-64	18.4
65 & older	33.4
	99.9
Length of Stay	
1-3 months	3.6
3 months-2 years	15.6
2 years-10 years	26.3
10 years and longer	54.5
	100.0
Sex	
Male	48.2
Female	51.8
	100.0
Race	
White	80.1
Non-white (mostly black or Puerto Rican)	19.9
	100.0
Legal Status	
Voluntary	43.1
Involuntary	56.9
	100.0

The most frequent diagnosis was non-paranoid schizophrenia followed by paranoid schizophrenia and psychotic organic brain syndromes, the latter usually being chronic in nature. There were many old patients, and most of the patients had resided in hospital for years. There were equal numbers of men and women, and most patients were white. More than half the patients were in hospital on an involuntary basis. These characteristics were analyzed using chi-square in relation to whether patients manifested one, two, or all three types of dangerous behavior.

Paranoid schizophrenic patients were more likely than other patients to have manifested assault alone and suicide alone, while non-paranoid schizophrenics and mentally retarded patients were more likely to have more than one type of dangerous behavior or to have destruction of property alone as a problem. As expected, depressed patients were more likely to have attempted suicide as the only type of dangerous behavior. Patients with psychotic organic brain syndromes were more likely to have been assaultive, either as the only problem or in conjunction with suicide attempts ($p = .0035$).

As an aside, other aspects of their assessment using a modified NOSIE scale,[16] showed that patients with assault only or assault in conjunction with other behaviors were more likely to be described as impatient, irritable, and verbally abusive. At the same time, assaultive patients were more likely to be functioning better than patients with other types of dangerous behavior, even though only at a basic level such as keeping their clothes neat, talking more to other patients about their interests, and knowing the names of staff. There were no differences in regard to the type of dangerous behavior and the presence of hallucinations, delusions, inappropriate affect, bizarre habits, or other manifestations of psychosis. This is not to say that active psychosis was not frequent since approximately half of all patients had active psychotic symptoms.

Younger patients were more likely to have manifested more than one type of dangerous behavior ($p<.00005$). Men were more likely to have concurrence of all three types of dangerous behavior as well as a combination of destruction of property and suicidal behavior. Women were more likely to have had suicide alone as well as suicide and assault as a problem ($p = .0051$). Patients manifesting more than one type of dangerous behavior were more likely in hospital on an involuntary basis, while those with only one type of dangerous behavior were more likely in hospital on a voluntary basis ($p = .05$). Race and length of stay in hospital were not related to the type of dangerous behavior manifested by patients.

Last, the surveyors determined whether various types of emergency control measures has been used in the thirty days preceding the survey. Overall, 35.6 percent of the dangerous patients required emergency medication at least once, 15.4 percent required physical restraints or seclusion, and 25.3 percent required one-to-one supervision in the preceding thirty days.

The percentages of patients receiving these emergency control measures were increased, usually two- or three-fold, for those patients with more than one type of dangerous behavior, especially where assault was present.

Discussion

Even among chronic inpatients, there was a substantial number of patients who manifested one or more types of dangerous behavior. Assault was the most frequent type, either alone or in conjunction with other types of behavior. In terms of assault or other outwardly directed violence there is no way to compare the rates in my survey to those in studies of incident reports since they relied on hospital census data and could not calculate actual rates. However, the rates in my survey clearly exceed the incidents reported by Ekblom.[1,2] Although suicide attempts or deliberate self-injury were less frequent, the finding that 1.8 percent of the patients had manifested this behavior in the three months preceding the survey is higher than the self-injury in hospitals found by Johnson.[2]

Diagnostic characteristics were interesting in that non-paranoid types of schizophrenia and mental retardation were associated with greater likelihood of multiple types of dangerous behavior and violence directed toward inanimate objects in the environment, while paranoid schizophrenics directed violence toward others in the form of assault as well as toward themselves in the form of suicide or other self-injury. Dangerous behavior by paranoid schizophrenics may have been more premeditated and involved a higher level of interpersonal functioning, while the violence of non-paranoid schizophrenics and the mentally retarded was more disorganized and diffuse in its target.

There were indications that the presence of more than one type of dangerous behavior was associated with the use of commitment procedures and the use of emergency control measures such as seclusion, restraint, and emergency medications. This reflects well on the staff of these state hospitals, indicating that these measures are used according to the number, if not the degree, of dangerous behaviors exhibited by patients, as does the opposite side of the picture, namely that a number of patients with one or more types of dangerous behavior were managed without resorting to emergency control measures.

In conclusion, dangerous behavior among chronic mental patients in these hospitals was substantial and posed a risk to staff as well as patients in the hospitals. This is contrary to the docile or burned out image of the chronic inpatient. These findings should alert us of the need to develop policies for effective yet humane management of dangerous behavior in hospitals.

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